REMARKS

Claims 1-30 are pending in the present application. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

A. The Examiner rejected Claims 1-5, 7-18 and 20-29 under 35 U.S.C. § 102(b) as being anticipated by Munro (U.S. Patent No. 4,864,438) (hereinafter "Munro"). This rejection is respectfully traversed.

With respect to Claim 1, such claim recites "A method in a secure gateway for sharing a multiple gateway automated data storage system containing a first data storage unit with data stored within the first data storage unit, comprising the steps of: **transmitting the data from the first data storage unit within a first automated data storage system to a second data storage unit**; receiving a request from a second data storage system for the second data storage unit; and **transporting the second data storage unit to the second data storage system**". As can be seen, this claim recites that *data is transmitted* from a first data storage unit to a second data storage unit (shown in the preferred embodiment at Applicant's Figure 7, step 708). A request is received from a second data storage system for this second data storage unit. This second data storage unit is *transported* to the second data storage system. The cited Munro reference does not teach transmitting of data from a first storage unit to a second storage unit and transporting this second storage unit to a second library. In rejecting Claim 1, the Examiner cites Munro column 2, lines 47-57 as teaching the claimed "transmitting" step. Applicants show that there, Munro states:

> "The control unit activates the robot arm which consists of a six-motion, servo-controlled mechanism in response to control signals received from the library management unit. This robot arm mechanism contains the necessary apparatus to accurately locate and retrieve the selected tape cartridge from the identified tape cartridge storage cell in the cylindrical array, *transport* the selected tape cartridge to the designated tape drive unit and load the selected tape cartridge into the tape drive unit so that the data can be retrieved therefrom by the host computer." (*emphasis added)

As can be seen, this passage describes use of a robotic arm to transport a tape cartridge. There is no teaching in this passage of transmitted data from one data storage unit to another data storage unit. Claim 1 expressly recites "transmitting the data from the first data storage unit within a first automated data storage system to a second data storage unit". As the passage cited in rejecting this claimed step merely describes *transport* of a data cartridge, and does not teach *transmitting data* from one data storage unit to another, it is shown that Claim 1 is not anticipated by the cited reference. For a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990) (emphasis added by Applicants). The cited reference does not teach transmitting of data from a first data storage unit to a second data storage unit, and thus Claim 1 has been erroneously rejected under 35 USC 102(b) as every element of the claimed invention is not identically shown in a single reference.

Applicants further show that even in an alternative interpretation, where the tape drive unit is improperly interpreted as being the claimed second data storage unit (the improper interpretation coming about because the tape drive unit does not store data), such improper interpretation fails in the third claimed step of Claim 1, which recites that the second data storage unit is transported to a second automated data storage system. The tape drive units of Munro are not transported at all, but are fixed within a given data storage system. Thus, even with such improper interpretation of what a data storage unit is, such improper interpretation still results in at least one missing claimed feature. Thus, the cited Munro reference does not anticipate Claim 1 even if the teachings of the cited passage at column 2, lines 47-55 (recited as teaching the first step of Claim 1) teach that a robotic arm transports a tape cartridge to a drive for retrieving data by a host computer (column 2, lines 54-57).

Still further with respect to Claim 1, the cited reference does not teach the claimed step of "receiving a request *from a second data storage system* for the second data storage unit". In rejecting this aspect of Claim 1, the Examiner cites Munro column 2, lines 25-35 and column 2, line 64 – column 3, line 26. Applicants urge that the passage cited at column 2, beginning on line 25 merely describes that the actual tape cartridge and

tape drive selection is accomplished by both tape cartridge library software in the host computer and a library management unit that is interposed between the host computer and the control unit of the library module. There is no mention of any second data storage system in this cited passage, and thus there is no teaching of receiving a request from such a (missing) second data storage system for the second data storage unit. While the Munro passage cited at column 2, beginning on line 64 does describe an ability to transfer a selected tape cartridge from one module to another module using a pass-thru port, *how* such transfer is initiated is not described. In particular, this cited passage does not teach the claimed step of "receiving a request *from a second data storage system* for the second data storage unit". Rather, it merely describes "coordinating the operation of a plurality of automated tape library modules". Importantly, Munro describes a separate path selection apparatus that is used to regulate movement of tape cartridges (column 3, lines 41-50; column 4, lines 1-9). The data storage system for which the tape cartridge is transported to does not itself request the tape cartridge. The cited reference expressly teaches a separate apparatus to facilate and manage tape cartridge transport between libraries. Thus, Claim 1 is further shown to not be anticipated by the cited reference.

Applicants initially traverse the rejection of Claims 2-5 and 7-13 for reasons given above with respect to Claim 1 (of which Claims 2-5 and 7-13 depend upon).

Further with respect to Claim 10, Applicants urge that the cited reference does not teach the claimed steps of "decataloging the second data storage unit from the first automated data storage system; and notifying the automated library data storage system library server that the second data storage unit has been removed from the first automated data storage system". As can be seen, information pertaining to the second data storage unit is acted upon by two distinct apparatus – the first automated data storage system (where the second data storage unit is decatalogued from), and a library server (which is notified of the removal). The cited reference teaches a single, central location for maintaining storage volume locations (column 15, lines 34-38; column 18, lines 58-60). There is no teaching of both a decataloging step (decataloging from the first automated data storage system) and a notification step (notifying the automated library data storage system library server), as expressly recited in Claim 10. Thus, Claim 10 is further shown

to not be anticipated by the cited reference, as every claimed element is not identically shown in a single reference.

Further with respect to Claim 11, and for similar reasons to those given above with respect to Claim 10, the cited reference does not teach both a cataloging step (cataloging into the second automated data storage system) and a notification step (notifying the automated library data storage system library server), as expressly recited in Claim 11. Thus, Claim 11 is further shown to not be anticipated by the cited reference, as every claimed element is not identically shown in a single reference.

Applicants traverse the rejection of Claim 14 (and dependent Claims 15-18 and 20-26) and Claim 27 (and dependent Claims 28-29) for similar reasons to those given above with respect to Claim 1.

Applicants further traverse the rejection of Claim 23 for similar reasons to the further reasons given above with respect to Claim 10.

Applicants further traverse the rejection of Claim 24 for similar reasons to the further reasons given above with respect to Claim 11.

Therefore, the rejection of Claims 1-5, 7-18 and 20-29 under 35 U.S.C. § 102 has been overcome.

B. The Examiner rejected Claim 30 under 35 U.S.C. § 102(b) as being anticipated by Burke et al. (U.S. Patent No. 5,613,154) (hereinafter "Burke"). This rejection is respectfully traversed.

For a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990) (emphasis added by Applicants). Applicants will now show that there are at least two claimed elements not identically shown in the cited Burke reference, and therefore the cited Burke reference does not anticipate the invention recited in Claim 30.

Claim 30 recites "**A secure gateway apparatus for sharing a multiple gateway automated data storage system**, the apparatus comprising: a controller that controls transporting a data storage unit from a first data storage device to a second data storage device; and a transportation device that transports the data storage unit from the first data

storage device to the second data storage device, **wherein the transportation device protects against transporting the data storage unit from the second data storage device back to the first data storage device**". As can be seen by the bolded sections above, Claim 30 includes elements of (1) a secure gateway apparatus for sharing a *multiple gateway* automated data storage system, and (2) a transport device that *protects against* transporting the data storage unit from the second data storage device back to the first data storage device. The cited Burke reference does not teach either (i) the sharing of a multiple gateway automated data storage system, or (ii) a transportation device that protects against transporting a data storage unit from one data storage device back to another data storage device.

As to missing claimed element (i), the cited reference does not teach any type of multiple gateway automated data storage system, and therefore is necessarily follows that it does not teach any apparatus for sharing such a (missing) multiple gateway automated data storage system. In rejecting Claim 30, the Examiner cites column 15, lines 5-31, column 10, line 55 – column 11, line 15; figures 9-10 with description; and column 11, lines 7-15. Applicants will reproduce these cited passages below, to evidence there is no teaching whatsoever of any *multiple gateway* automated data storage system, or a secure gateway apparatus for sharing such (missing) multiple gateway automated data storage system.

At column 15, lines 5-31, Burke states:

> "host processor request servicing means coupled to the control unit for servicing a host processor request; the host processor request servicing means including means for processing one or more data volumes stored on one or more respective requested unmounted TDSMs by: determining if the one or more requested unmounted TDSMs are positioned at the input station for being transferred by the picker; disabling the information sensing device such that if a condition exists wherein a machine readable label is attached to the one or more requested unmounted TDSMs then the label is not automatically read; in response to determining if the one or more requested unmounted TDSMs are positioned at the input station, commanding the picker to transfer a TDSM selected from the one or more TDSMs at the input station to a selected medium drive; mounting the TDSM on the selected medium drive; sending a signal to indicate that the

mounting of the TDSM on the selected medium drive is completed; processing the data volume stored on the TDSM to satisfy the host processor request; and commanding the picker to transfer the TDSM from the selected medium drive to the input station."

At column 10, line 55 – column 11, line 15, Burke states:

"The locking of the door generates a signal from sensing device 19 that the station is ready for TDSMs to be retrieved and subsequently mounted on a drive, such as drive 88, for processing. In step 110, the library manager controller generates the appropriate command to the robotic picker to move the first cartridge from the input station to the selected drive. These commands are interleaved into a command queue with host generated commands such that the TDSM mounts are accomplished as part of normal library activity. Step 112 shows continuity with the steps of FIG. 10 in a similar fashion as step 104. In step 111, the operator is informed on screen 200 that the first mount has been completed and the operator is thereby prompted to activate a host application that has requested the TDSM data. In step 114, the data from the TDSM is uploaded to the host through the I/O control 32 and processing is complete so that the picker is commanded by the library manager controller 18 to return the TDSM to the input/output station 17. An inquiry is automatically performed in step 116 to determine if an interrupt to terminate TDSM mount mode has been generated by host 11 or by the operator. If the answer is "yes" the processing flows to step 118, which picks up in FIG. 10. If the answer to the inquiry is "no" then processing continues in normal, uninterrupted fashion to step 120. In step 122, the processed TDSM is returned by the cartridge accessor to input/output station 17. In step 124, the library manager controller 18 checks to see if any non-processed TDSMs remain at station 17."

The description of Burke's figures 9-10 is at column 10, line 55 – column 11, line 15, where Burke states:

"The process starts in step 100. In step 102, the operator selects the TDSM mount mode from the operator interface shown displayed as "set-up stand-alone device" entry 202 on pop-up window 208 displayed on screen 200, which is part of the display for computer 54 or 80. The operator may later use entries 204 and 206 to reset the device and check the status respectively. Other entries shown on the interface are not critical to the operation of the present invention and therefore not discussed here. Any of these entries are available after the operator selects the selection "commands" 207 from menu bar 205, in a

known fashion (e.g., by using a well-known mouse to move a cursor to the desired selection). Further, as part of step 102, the library manager controller 18 returns a control panel pop-up window 210 to the operator for carrying out the TDSM mount mode. The operator selects the device address of the drive to be used, and enters this in field 212 on pop-up window 210, and specifies that TDSMs are to be mounted on the drive by selecting field 216. Machine readable external labels are typically required for cartridges used in automated libraries. They are used as a tool for managing cartridges that are stored in bins in the library. Since a TDSM will not reside in a bin in the library, machine readable external labels are not required. Thus, selecting field 216 also instructs the library to ignore any external label or the cartridge having a bar code. The operator selects "OK" entry 214 on the screen 200. In step 106, the operator places one or more TDSMs into the input station in the order that the TDSMs should be mounted on the drive. Step 104 is shown to indicate continuity with the steps shown in FIG. 10. In step 108, the library manager controller 18 issues a command to automatically lock the door 60 on the input/output station 17.

The locking of the door generates a signal from sensing device 19 that the station is ready for TDSMs to be retrieved and subsequently mounted on a drive, such as drive 88, for processing. In step 110, the library manager controller generates the appropriate command to the robotic picker to move the first cartridge from the input station to the selected drive. These commands are interleaved into a command queue with host generated commands such that the TDSM mounts are accomplished as part of normal library activity. Step 112 shows continuity with the steps of FIG. 10 in a similar fashion as step 104. In step 111, the operator is informed on screen 200 that the first mount has been completed and the operator is thereby prompted to activate a host application that has requested the TDSM data. In step 114, the data from the TDSM is uploaded to the host through the I/O control 32 and processing is complete so that the picker is commanded by the library manager controller 18 to return the TDSM to the input/output station 17. An inquiry is automatically performed in step 116 to determine if an interrupt to terminate TDSM mount mode has been generated by host 11 or by the operator. If the answer is "yes" the processing flows to step 118, which picks up in FIG. 10. If the answer to the inquiry is "no" then processing continues in normal, uninterrupted fashion to step 120. In step 122, the processed TDSM is returned by the cartridge accessor to input/output station 17. In step 124, the library manager controller 18 checks to see if any non-processed TDSMs remain at station 17. The sensing device 19 is used in conjunction with logic in the library manager controller to keep up with which cartridges in certain slots 62 have not been moved, and in this way it is known which TDSMs are processed and which remain unprocessed. If the answer to the inquiry is "yes" then another check is

performed in step 130 to check for interrupts. If there are no interrupts then processing continues to step 136. In step 136, the library manager controller transfers the next unprocessed TDSM in the input/output station 17 to the selected device. In an iterative fashion, the flow logic returns to step 112 and subsequently to step 114 for repetition of the steps until the answer to the inquiry in step 124 is "no". This indicates that no non-processed TDSMs remain at station 17. In this case, as shown in step 126, the library manager controller issues a command to unlock the station door 60, thus changing the status indicators 64 on embodiment 17a, or the input/output mode indicators 71 and 78 on embodiment 17b of the input/output station 17. In inquiry step 132, if more TDSM data volumes are requested by the host 11, the operator may (following the flow of step 104 to step 106) place TDSMs in the input/output station into slots 62. If no more TDSM data volumes are requested, then processing continues to step 118."

The Burke passage cited at column 11, lines 7-15, is already listed above in the description of Figures 9-10, and thus is not re-replicated here.

As can be seen from the above discussions of Burke, the cited passage beginning at column 15 describes processing of TDSMs that are located in an input station. A picker transfers a given TDSM to a selected medium drive where a data volume stored on such TDSM is then processed to satisfy a host processor request, and then the picker is commanded to transfer the TDSM from the selected medium drive back to the input station. This passage provides no teaching of a secure gateway apparatus for sharing a multiple gateway automated data storage system, as there is no teaching of a *multiple gateway* automated data storage system.

The cited passage beginning at column 10 similarly describes the transporting of TDSMs from an input station to a selected medium drive using a picker. This passage provides no teaching of a secure gateway apparatus for sharing a multiple gateway automated data storage system, as there is no teaching of a *multiple gateway* automated data storage system.

The cited Figures 9 and 10 with description similarly describes the transporting of TDSMs from an input station to a selected medium drive using a picker. This passage provides no teaching of a secure gateway apparatus for sharing a multiple gateway automated data storage system, as there is no teaching of a *multiple gateway* automated data storage system.

The cited passage beginning at column 11 describes that a check is made on whether an interrupt to terminate a TDSM mount mode has been generated by the host or by the operator. If yes, processing continues to step 118 (Figure 11) to process such interrupt. If no, then processing continues in normal fashion in step 120 (Figure 10), where the TDSM is returned to the I/O station and a check is made of whether there are any more TDSMs to process. This passage provides no teaching of a secure gateway apparatus for sharing a multiple gateway automated data storage system, as there is no teaching of a *multiple gateway* automated data storage system.

As to missing claimed element (ii) ("wherein the transportation device protects against transporting the data storage unit from the second data storage device back to the first data storage device"), the Examiner cites Burke figures 9-10 with description and column 11, lines 7-15 as teaching this claimed feature. The description associated with figures 9-10 describe the transporting of TDSMs from an input station to a selected medium drive using a picker, and the return of such TDSM back to the input station. This passage provides no teaching of wherein the transportation device *protects against* transporting the data storage unit from the second data storage device back to the first data storage device, as the TDSM is always returned back to the input station. This can be seen by Figure 9, block 114 and subsequent processing. Block 114 indicates that the TDSM data volume (located in the medium drive) has been processed. A check is then made at 116 on whether an interrupt has occurred. If no, normal processing continues to step 120 (Figure 10) where the TDSM is then returned to the input station (step 122, Figure 10). Returning back to decision block 116, if yes (meaning an interrupt did occur), processing continues to step 118 (Figure 11) where a check is made at 140 on whether a TDSM remains at the selected device. If so, the picker returns the TDSM to the input station at step 142 (column 11, lines 40-43). Thus, in both instances out of decision block 116, the TDSM is returned to the input station. Burke must return the TDSMs from the drive to the input station or there would be a jam-up and cause Burke's device to no longer function as there is no where else to put the TDSMs, so they must either be in the drive for processing, being transported to/from the input station by the picker, or in the input station. Importantly, the decision block at 116 is for the express purpose of double-checking to ensure that a TDSM does not inadvertently get left in the

drive due to the interrupt, and subsequent processing explicitly moves the TDSM back to the input station. This check at block 116 does not block against returning the drive, but instead explicitly moves the TDSM back to the input station if it is still in the drive. There is simply no teaching of a the transportation device that *protects against* transporting the data storage unit from the second data storage device back to the first data storage device, as expressly recited in Claim 30.

Thus, it has been shown that Claim 30 is not anticipated by the cited reference as there are at least two claimed features which are not identically shown in the cited Burke reference. Claim 30 has thus been erroneously rejected under 35 USC 102(b). Therefore, the rejection of Claim 30 under 35 U.S.C. § 102 has been overcome.

II. 35 U.S.C. § 103, Obviousness

The Examiner rejected Claims 6 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Munro in view of Honma et al. (U.S. Patent Publication US 2004/0073676) (hereinafter "Honma"). This rejection is respectfully traversed.

Applicants initially traverse the rejection of Claims 6 and 19 for similar reasons to those given above with respect to Claim 1 and urge that there are at least two claimed features not taught or suggested by the cited references.

Still further, Applicants urge that it is error to reconstruct the patentee's claimed invention from the prior art by using the patentee's claims as a "blueprint". When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985). When an obviousness determination is based on multiple prior art references, there must be a showing of some "teaching, suggestion, or reason" to combine the references. "...absence of such suggestion to combine is dispositive in an obviousness determination". *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 42 USPQ2d 1378 (Fed. Cir. 1997). Applicants urge that there is simply no teaching, suggestion or other reason to modify the teachings of Munro to include a classified data storage system, as expressly recited in Claims 6 and 19. The only

motivation for inclusion of a classified automated data storage system comes from Applicants' own patent disclosure, which is improper hindsight analysis.

Munroe makes no mention of any desire for implementing a classified data storage system, and thus provides no motivation to modify the teachings contained therein to include such a classified automated data storage system. While the cited Honma reference alludes to providing data storage restrictions using a front-end fiber channel switch, such teaching does not teach or suggest a classified automated data storage system. Thus, even when the references have been improperly combined, there is still a missing claimed feature – strongly evidencing non-obviousness.

Further, the fact that the Honma reference describes restricted paths to access data storage (such restriction being accomplished by a separate fiber channel switch) does not provide any motivation *to modify the teachings of the cited Munroe reference* in accordance with the claimed invention. Restated, a mere teaching of security concerns in one reference does not provide motivation to modify another reference which has no security classification concerns. To find otherwise would effectively eliminate the teaching/suggestion/motivation requirement that is expressly required by well-established case law, as any reference that describes 'anything' could be used as motivation to modify another reference to include the 'anything' even though the another reference is not concerned with the 'anything'. This certainly is not the law regarding a requirement for a motivation to modify a reference, as such an interpretation would effectively eliminate the motivation requirement as motivation would always exist no matter what.

Still further, due to the Munro architecture, there is no ability to provide such a secured environment, as the LSM's share a common network (Figure 1, elements 162 and 163) with no ability to only allow data flow to a high security level but not allow data flow to a lower security level (Specification page 6, lines 11-16). The Munro architecture is expressly required to allow unfettered data sharing between the LSMs (see Munro column 3, lines 14-27, where it states "Thus, by coordinating the operation of a plurality of automated tape cartridge library modules, each and every tape cartridge in the library can be mounted on any selected tape drive unit in the entire complex"), and to reserve particular paths for efficient transport between such LSMs (Munro column 6, 12-38), both of which are expressed purposes/advantages of the Munro teachings. To somehow

re-architect the teachings of Munro to provide a classified environment would eviscerate the Munro's path reservation system and unfettered access to media within the entire complex, further evidencing no motivation to modify the teachings of Munro in accordance with the claimed invention.

Thus, it is shown that the references have been improperly combined using improper hindsight analysis, and even when improperly combined there are still at least three missing claimed features – the two missing features described with respect to Claim 1 and the additional missing claimed feature specifically described with respect to Claims 6 and 19. To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03 (emphasis added by Applicants). *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974). Thus, Claims 6 and 19 are shown to not be obvious in view of the cited references as all the claimed limitations are not taught or suggested by the cited references.

Therefore, the rejection of Claims 6 and 19 under 35 U.S.C. § 103 has been overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

Duke W. Yee
Reg. No. 34,285
Wayne P. Bailey
Reg. No. 34,289
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorneys for Applicant